

SEQUENCE LISTING

<110> University of Utah Research Foundation

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<120> Linear Gamma-Carboxyglutamate Rich Conotoxins

<130> 2314-224-II

<150> US 60/273,639

<151> 2001-03-07

<160> 196

<170> PatentIn version 3.0

<210> 1

<211> 24

<212> PRT

<213> Conus ammiralis

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa at residue 1 is Gln or pygro-Glu; Xaa at residues 7, 8 and 9 is Glu or gamma-carboxy-Glu; Xaa at residues 13 and 16 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 1

Xaa Gly Gln Asp Asp Ser Xaa Xaa Xaa Asp Ser Gln Xaa Val Met Xaa
1 5 10 15

His Gly Gln Arg Arg Glu Arg Arg
20

<210> 2

<211> 17

<212> PRT

<213> Conus betulinus

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; Xaa at residue 17 is Pro or hydroxy-Pro

<400> 2

Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Leu Thr
1 5 10 15

Xaa

<210> 3

<211> 17

<212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 3
 Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Xaa

<210> 4
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
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 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 4
 Asp Gly Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu Asn Xaa Leu Thr
 1 5 10 15

Xaa

<210> 5
 <211> 18
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-G
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<400> 5
 Gly Tyr Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Xaa
 1 5 10 15

Xaa Ala

<210> 6
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; Xaa
 at residue 17 is Pro or hydroxy-Pro

<400> 6
 Gly Gly Gly Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Xaa

<210> 7
 <211> 18
 <212> PRT
 <213> Conus bullatus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residue 2 is Pro or hydroxy-Pro; Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 5 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 7
 Asn Xaa Xaa Thr Xaa Ile Xaa Ile Val Xaa Ile Ser Arg Xaa Leu Xaa
 1 5 10 15

Xaa Ile

<210> 8
 <211> 20
 <212> PRT
 <213> Conus bullatus

<220>
 <221> PEPTIDE
 <222> (1)..(20)
 <223> Xaa at residue 2 is Pro or hydroxy-Pro; Xaa at residues 3, 6, 9, 12, 16, 18 and 19 is Glu or gamma-carboxy-Glu; Xaa at residue 5 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 8
 Asn Xaa Xaa Thr Xaa Xaa Asn Leu Xaa Leu Val Xaa Ile Ser Arg Xaa
 1 5 10 15

Leu Xaa Xaa Ile
 20

<210> 9
 <211> 19
 <212> PRT
 <213> Conus catus

<220>

<221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 9
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asn

<210> 10
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 10
 Gly Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asp

<210> 11
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
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 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 11
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Pro
 1 5 10 15

Xaa Arg Asn

<210> 12
 <211> 17
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 12
 Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Thr Ala Arg Xaa Arg Asp
 1 5 10 15

Ser

<210> 13
 <211> 17
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE

<222> (1)..(17)
 <223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 13
 Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Ala Ala Arg Xaa Arg Asp
 1 5 10 15

Ser

<210> 14
 <211> 29
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(29)
 <223> Xaa at residues 2, 4, 10 and 16 is Glu or gamma-carboxy-Glu; Xaa
 at residues 3, 9, 25 and 28 is Pro or hydroxy-Pro; Xaa at residue
 26 is Trp (D or L) or halo-Trp (D or L)

<220>
 <221> PEPTIDE
 <222> (1)..(29)
 <223> Xaa at residue 29 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys
 or N,N,N-trimethyl-Lys

<400> 14
 Gly Xaa Xaa Xaa Val Gly Ser Ile Xaa Xaa Ala Val Arg Gln Gln Xaa
 1 5 10 15

Cys Ile Arg Asn Asn Asn Asn Arg Xaa Xaa Cys Xaa Xaa
 20 25

<210> 15
 <211> 17
 <212> PRT
 <213> Conus distans

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 5, 6, 8 and 12 is Glu or gamma-carboxy-Glu

<400> 15
 Thr Ile Thr Ala Xaa Xaa Ala Xaa Arg Thr Ser Xaa Arg Met Ser Ser
 1 5 10 15

Met

<210> 16
 <211> 19
 <212> PRT
 <213> Conus distans

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 2, 7, 8, 10
 and 14 is Glu or gamma-carboxy-Glu; Xaa at residues 4 and 6 is Pr

o or hydroxy-Pro

<400> 16

Xaa Xaa Thr Xaa Thr Xaa Xaa Xaa Val Xaa Arg His Thr Xaa Arg Leu
1 5 10 15
Lys Ser Met

<210> 17

<211> 15

<212> PRT

<213> Conus episcopatus

<220>

<221> PEPTIDE

<222> (1)..(15)

<223> Xaa at residues 7, 11 and 13 is Glu or gamma-carboxy-Glu; Xaa at residue 14 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 17

Gly Gly Lys Asp Ile Val Xaa Thr Ile Thr Xaa Leu Xaa Xaa Ile
1 5 10 15

<210> 18

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 2, 3, 4, 7, 11 and 15 is Glu or gamma-carboxy-Glu

<400> 18

Gly Xaa Xaa Xaa Val Ala Xaa Met Ala Ala Xaa Ile Ala Arg Xaa Asn
1 5 10 15

Gln Ala Asn

<210> 19

<211> 18

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr Xaa at residues 3, 7, 10, 14 and 17 is Glu or gamma-carboxy-Glu

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residue 16 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 19

Ser Xaa Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Xaa

1

5

10

15

Xaa Arg

<210> 20

<211> 34

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(34)

<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr Xaa at residues 3, 7, 10, 14 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 28 is Pro or hydroxy-Pro

<220>

<221> PEPTIDE

<222> (1)..(34)

<223> Xaa at residues 16, 20 and 21 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 20

Ser	Xaa	Xaa	Gln	Ala	Arg	Xaa	Val	Gln	Xaa	Ala	Val	Asn	Xaa	Leu	Xaa
1				5				10						15	

Xaa	Arg	Gly	Xaa	Xaa	Ile	Ile	Met	Leu	Gly	Val	Xaa	Arg	Asp	Thr	Arg
		20					25						30		

Gln Phe

<210> 21

<211> 17

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(17)

<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu

<400> 21

Xaa	Xaa	Asp	Asp	Arg	Xaa	Ile	Ala	Xaa	Thr	Val	Arg	Xaa	Leu	Xaa	Xaa
1				5				10					15		

Ile

<210> 22

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa at residues 5, 6, 9, 12 and 16 is Glu or gamma-carboxy-Glu

$\langle 210 \rangle$	26
$\langle 211 \rangle$	19


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<220>
<221> PEPTIDE
<222> (1)..(19)
<223> Xaa at residues 2, 3, 4, 7, 11, 15 and 16 is Glu or gamma-carboxy
      -Glu; Xaa at residue 19 is Lys, nor-Lys, N-methyl-Lys, N,N-dimeth
      yl-Lys or N,N,N-trimethyl-Lys

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Ala Val Xaa

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<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu; Xaa at residues 7 and 19 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys
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```
<400> 27
Gly Xaa Xaa Xaa His Ser Xaa Xaa Gln Xaa Cys Leu Arg Xaa Val Arg
1          5          10          15
Val Asn Xaa Val Gln Gln Xaa Cys
          20
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<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu; Xaa at residues 7 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys
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<400> 28
Gly Xaa Xaa Xaa His Ser Xaa Xaa Gln Xaa Cys Leu Arg Xaa Val Arg

1 5 10 15

Val Asn Asn Val Gln Gln Xaa Cys
20

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<210> 29
<211> 24
<212> PRT
<213> Conus purpurascens
<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu; Xaa at residues 7 and 19 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys
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<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-
sulpho-Tyr, O-phospho-Tyr or nitro-Tyr
```

<400> 29
Gly Xaa Xaa Xaa His Ser Xaa Xaa Gln Xaa Cys Leu Arg Xaa Ile Arg
1 5 10 15

Val Asn Xaa Val Gln Gln Xaa Cys
20

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<210> 30
<211> 24
<212> PRT
<213> Conus purpurascens

<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residues 2, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
Xaa at residues 19 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Ly
s or N,N,N-trimethyl-Lys

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<220>
<221>  PEPTIDE
<222>  (1)..(24)
<223>  Xaa at residue 6 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-
sulpho-Tyr, O-phospho-Tyr or nitro-Tyr
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<400> 30
Gly Xaa Ala Xaa His Xaa Ala Phe Gln Xaa Cys Leu Arg Xaa Ile Asn
1 5 10 15

Val Asn Xaa Val Gln Gln Xaa Cys
20

<210>	31
<211>	15
<212>	PRT
<213>	Conus purpurascens

<220>

<221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 4, 7, 10, 13 and 14 is Glu or gamma-carboxy-Glu

<400> 31
 Gly Leu Xaa Xaa Asp Ile Xaa Phe Ile Xaa Thr Ile Xaa Xaa Ile
 1 5 10 15

<210> 32
 <211> 15
 <212> PRT
 <213> Conus stercusmuscarum

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 7, 13 and 14 is Glu or gamma-carboxy-Glu; Xaa at residue 11 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 32
 Ile Thr Xaa Thr Asp Ile Xaa Leu Val Met Xaa Leu Xaa Xaa Ile
 1 5 10 15

<210> 33
 <211> 20
 <212> PRT
 <213> Conus aurisiacus

<220>
 <221> PEPTIDE
 <222> (1)..(20)
 <223> Xaa at residues 2, 4, 11 and 15 is Glu or gamma-carboxy-Glu; Xaa at residue 20 is Lys, nor-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys

<400> 33
 Gly Xaa Asp Xaa Val Ser Gln Met Ser Xaa Xaa Ile Leu Arg Xaa Leu
 1 5 10 15

Glu Leu Gln Xaa
 20

<210> 34
 <211> 31
 <212> DNA
 <213> Artificial

<220>
 <223> oligonucleotide primer

<400> 34
 caggatcctg tatctgctgg tgcccctggt g

31

<210> 35
 <211> 23
 <212> DNA
 <213> Artificial

<220>

<223> oligonucleotide primer

<400> 35

aagctcgagt aacaacgcag agt

23

<210> 36

<211> 432

<212> DNA

<213> Conus catus

<400> 36

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60

ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc gggtagacgcc 120

acagcgctga gacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180

agtggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacggct 240

aaaagcgacg aagagctact acgagaggat gtagagactg ttttagaact cgaaaggaat 300

ggaaaaagat aatcaagctg agtgttccac gtgacactcg tcagttctaa agtccccaga 360

taaatcgttc cctattttgc cacattcttt ctttctcttt tcatttaatt ccccaaattct 420

ttcatgttta tt 432

<210> 37

<211> 102

<212> PRT

<213> Conus catus

<400> 37

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30Glu Arg Arg Ser Gly Asp Ala Thr Ala Leu Arg Pro Glu Pro Val Leu
35 40 45Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Ser Gly Lys Asp Arg
50 55 60Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Lys
65 70 75 80Ser Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
85 90 95Glu Arg Asn Gly Lys Arg
100

<210> 38

<211> 19

<212> PRT

<213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu
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<400> 38
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asn

<210> 39
 <211> 432
 <212> DNA
 <213> Conus catus

<400> 39
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtgacctt ccacctaatac 60
 ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc gggtgacgcc 120
 acagcgctga gacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 agtggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacggct 240
 aaaggcgacg aagagctact acgagaggat gtagagactg ttttagaact cgaaagggat 300
 ggaaaaagat aatcaagctg agtgttccac gtggcactcg tcagttctaa agtccccaga 360
 taaatcggttc cctattttgc cacattcttt ctttctcttt tcatttaatt ccccaaattct 420
 ttcatgttta tt 432

<210> 40
 <211> 102
 <212> PRT
 <213> Conus catus

<400> 40
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Ser Gly Asp Ala Thr Ala Leu Arg Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Ser Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Lys
 65 70 75 80
 Gly Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
 85 90 95
 Glu Arg Asp Gly Lys Arg
 100

<210> 41
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-carboxy-Glu

<400> 41
 Gly Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Xaa Arg Asp

<210> 42
 <211> 432
 <212> DNA
 <213> Conus catus

<400> 42
 gcgatgcaac tgtacacgta tctgtatctg ctggcgcccc tggtgacctt ccacctaatac 60
 ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc gggtgacgcc 120
 acagcgctga gacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 agtggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacggct 240
 aaaagcgacg aagagctact acgagaggat gtagagactg ttttagaacc cgaaaggaat 300
 ggaaaaagat aatcaagctg agtgttccac gtgacactcg tcagttctaa agtccccaga 360
 taaatcgttc cctattttgc cacattcttt ctttctcttt tcatttaatt ccccaaattct 420
 ttcattgttta tt 432

<210> 43
 <211> 102
 <212> PRT
 <213> Conus catus

<400> 43
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Ala Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Ser Gly Asp Ala Thr Ala Leu Arg Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Ser Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Lys
 65 70 75 80

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Glu Ala Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asn Asn Gly Lys Asp Arg
 50 55 60
 Ser Thr Gln Met Arg Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Arg
 65 70 75 80
 Ile Glu Glu Gly Leu Ile Glu Asp Leu Glu Thr Ala Arg Glu Arg Asp
 85 90 95
 Ser Gly Lys Arg
 100

<210> 47
 <211> 17
 <212> PRT
 <213> Conus catus
 <220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 47
 Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Thr Ala Arg Xaa Arg Asp
 1 5 10 15

Ser

<210> 48
 <211> 427
 <212> DNA
 <213> Conus catus

<400> 48
 gcgatgcaac tgtacacgta tctgtatctg ctggtgtccc tgggtgacctt ccacctaatac 60
 ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttt ggctgacgcc 120
 acagcgctgg aagctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacaac 180
 aatggcaagg acaggtcgac tcagatgagg aggattctca aaaagcaagg aaacacggct 240
 agaatcgagg aaggtctgat agaggatctg gaggctgcta gagaacgcga cagtggaaaa 300
 agataatcaa gctgagtggt ccacgtgaca ctcacagtt ctaaagtccc cagataaatc 360
 gttccctatt ttgcccacat tctttcttcc tcttttcggt taattcccca aatctttcat 420
 gttttatt 427

<210> 49
 <211> 100
 <212> PRT
 <213> Conus catus

<400> 49
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Ser Leu Val Thr Phe
 1 5 10 15


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<210> 50
<211> 17
<212> PRT
<213> Conus catus

<220>
<221> PEPTIDE
<222> (1)..(17)
<223> Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 50
Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Ala Ala Arg Xaa Arg Asp
1          5          10          15

Ser

<210> 51
<211> 433
<212> DNA
<213> Conus catus

<400> 51
gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtgacctt ccacctaatac 60
ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc ggctgacgcc 120
acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
aatggcaaag acaggttgac tcacatgaag aggatttctca aaaaacgagc aaacaaagcc 240
agaggcgaac cagaagttgg aagcataccg gaggcagtaa gacaacaaga atgtataaga 300
aataataata atcgaccttg gtgtcccaag tgacactcgt cagttctaaa gtctccagat 360
agatcgttcc ctatTTTTTgc cacactcttt ctttctcttt tcatttaagt tccccaaatc 420
tttcatgttt att 433

<210> 52
<211> 107
<212> PRT
<213> Conus catus

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<400> 52

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
50 55 60

Leu Thr His Met Lys Arg Ile Leu Lys Lys Arg Ala Asn Lys Arg Glu
65 70 75 80

Pro Glu Val Gly Ser Ile Pro Glu Ala Val Arg Gln Gln Glu Cys Ile
85 90 95

Arg Asn Asn Asn Asn Arg Pro Trp Cys Pro Lys
100 105

<210> 53

<211> 29

<212> PRT

<213> Conus catus

<220>

<221> PEPTIDE

<222> (1)..(29)

<223> Xaa at residues 2, 4, 10 and 16 is Glu or gamma-carboxy-Glu; Xaa
at residues 3, 9, 25 and 28 is Pro or hydroxy-Pro; Xaa at residue
26 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O
-phospho-Tyr or nitro-Tyr

<400> 53

Gly Xaa Xaa Xaa Val Gly Ser Ile Xaa Xaa Ala Val Arg Gln Gln Xaa
1 5 10 15

Cys Ile Arg Asn Asn Asn Asn Arg Xaa Xaa Cys Xaa Lys
20 25

<210> 54

<211> 430

<212> DNA

<213> Conus bullatus

<400> 54

gcgatgcaac tgtacacgta tctgtatctg ctggtgccct tggtagacctt ccacctaata 60
ctgggacacgg gcacactaga tcatggaggc gcactgactg aacgccgttc ggctgacgcc 120
acagcactga aacctgagcc tgtcctcctg cagaaaaccg ctgcccgcag caccgacgac 180
aatggcaaga agaggctgac tcagaggaag aggattctca aaaagcgagg aaacacggct 240
agaaaccccg aaacttatat agagattgtg gagatttcta gggaactcga agagattgga 300
aaaagataat caagctgggt gttccacgtg acactcgtca gttctgaagt cccgaggtag 360

atcgttcacct atttttgcca cactctttct ttctcttttc atttaattcc ccaaattctt 420
catgtttatt 430

<210> 55
<211> 101
<212> PRT
<213> Conus bullatus

<400> 55
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15
His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30
Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45
Leu Gln Lys Thr Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Lys Arg
50 55 60
Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg
65 70 75 80
Asn Pro Glu Thr Tyr Ile Glu Ile Val Glu Ile Ser Arg Glu Leu Glu
85 90 95
Glu Ile Gly Lys Arg
100

<210> 56
<211> 18
<212> PRT
<213> Conus bullatus

<220>
<221> PEPTIDE
<222> (1)..(18)
<223> Xaa at residue 1 is Pro or hydroxy-Pro; Xaa at residues 3, 5, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 5 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 56
Asn Xaa Xaa Thr Xaa Ile Xaa Ile Val Xaa Ile Ser Arg Xaa Leu Xaa
1 5 10 15

Xaa Ile

<210> 57
<211> 435
<212> DNA
<213> Conus bullatus

<400> 57
gcgatgcaac tgtacacgta tctgtatttg ctggtgccct tgggtgacctt ccacctaattc 60
ctgggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc ggctgacgcc 120

```

acagcgctga aacctgagcc tgcctcctg cagaaaaccg ctgcccgcag caccgacgac      180
aatggcaaga agaggctgac tcagaggaag aggattctca aaaagcgagg aaacacggct      240
agaaacccccg aaacttatta taatttagag cttgtggaga tttctaggga actcgaagaa      300
attggaaaaa gataatcaag ctgggtgttc cacgtgacac tcgtcagttc ttaagtccccg      360
aggtagatcg ttccctatatt ttgccacact ctttctttct cttttcattt aattccccaa      420
actttcatgt ttatt                                                         435

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<210> 58
<211> 103
<212> PRT
<213> Conus bullatus

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<400> 58
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1                               5                               10                               15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
                               20                               25                               30

Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
                               35                               40                               45

Leu Gln Lys Thr Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Lys Arg
                               50                               55                               60

Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg
65                               70                               75                               80

Asn Pro Glu Thr Tyr Tyr Asn Leu Glu Leu Val Glu Ile Ser Arg Glu
                               85                               90                               95

Leu Glu Glu Ile Gly Lys Arg
                               100

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```

<210> 59
<211> 20
<212> PRT
<213> Conus bullatus

```

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<220>
<221> PEPTIDE
<222> (1)..(20)
<223> Xaa at residue 1 is Pro or hydroxy-Pro; Xaa at residues 3, 9, 12,
      16, 18 and 19 is Glu or gamma-carboxy-Glu; Xaa at residues 5 and
      6 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-
      phospho-Tyr or nitro-Tyr

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```

<400> 59
Asn Xaa Xaa Thr Xaa Xaa Asn Leu Xaa Leu Val Xaa Ile Ser Arg Xaa
1                               5                               10                               15

Leu Xaa Xaa Ile
                               20

```

<210> 60
 <211> 425
 <212> DNA
 <213> Conus betulinus

<400> 60
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggc gcactgactg aacgccgttt ggctgatgcc 120
 acagcgctga aacctgagcc tgtcctcctg cagaaatccg ccgcccgcag caccgacgac 180
 aatggcaagg acaggttgac tcagatgatac aggattctca aaaagcgagg aaacatggcc 240
 agaggcggcg aagaagttag agagtctgca gagactcttc atgaactcac gccgtaggaa 300
 aaagaaaaag attaatacaag ctgggtgtcc cacgtgacac tcgtcagttc taaagtcccc 360
 agtttcctat ctttgccacg tttctttttc ttttcattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 61
 <211> 95
 <212> PRT
 <213> Conus betulinus

<400> 61
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Gly
 65 70 75 80
 Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Leu Thr Pro
 85 90 95

<210> 62
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 62
 Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Leu Thr
 1 5 10 15

Xaa

<210> 63
 <211> 425
 <212> DNA
 <213> Conus betulinus

<400> 63
 gcgatgcaac tgtatacgta tctgtatctg ctggtgccgc tggtagacctt ctacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggc gcactgactg aacgccggtt ggctgacgcc 120
 acagcgctga aacctgagcc tgtcctcctg cagaaatccg ccgcccgcag cactgacgac 180
 aatggcaagg acaggttgac tcagatgatac aggattctca aaaagcgagg aaacatggcc 240
 agaggcggcg aagaagttag agagtctgca gagactcttc atgaaatcac gccgtaggaa 300
 aaagaaaaag attaatacaag ctgggtgttc cacgtgacac tcgccagttc taaagtcccc 360
 agtttcctat ctttgccagg tttctttctc ttttcattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 64
 <211> 95
 <212> PRT
 <213> Conus betulinus

<400> 64
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Gly
 65 70 75 80
 Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr Pro
 85 90 95

<210> 65
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 65

Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Xaa

<210> 66

<211> 425

<212> DNA

<213> Conus betulinus

<400> 66

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tgggtgacctt ctacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggc gcactgactg aacgccggtt ggctgacgcc 120
 acagcgctga aacctaagcc tatectctg cagaaatccg ccgcccgcag cactgacgac 180
 aatggcaagg acaggttgac tcagatgatc aggattctca aaaagcgagg aaacatgggc 240
 agagacggcg aagaagtcag agaggctgca gagactctta atgaactcac gccgtaggaa 300
 aaagaaaaag attaatacaag ctgggtgttc cacgtgacac tcgtcagttc taaagtaccc 360
 agtttcctat ctttgccacg tttctttttc tttccattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 67

<211> 97

<212> PRT

<213> Conus betulinus

<400> 67

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Lys Pro Ile Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Gly Arg
 65 70 75 80
 Asp Gly Glu Glu Val Arg Glu Ala Ala Glu Thr Leu Asn Glu Leu Thr
 85 90 95

Pro

<210> 68

<211> 17

<212> PRT

<213> Conus betulinus

<220>

<221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X
 aa at residue 17 is Pro or hydroxy-Pro

<400> 68
 Asp Gly Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu Asn Xaa Leu Thr
 1 5 10 15

Xaa

<210> 69
 <211> 437
 <212> DNA
 <213> Conus betulinus

<400> 69
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tgggtgacctt ccacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggc gcactgactg aaagccgttc ggctgacgcc 120
 acagcactga aaccagggcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 aatggcaagg acaggttgac tcagatgaag aggactctca aaaagcgagg aaacacggcc 240
 agaggctacg aagatgatag agagattgca gagactgtta gagaactcga ggaagcagga 300
 aaatgaaaaa gattaatcaa gctgggtggt ccacgtgaca cttgtcagtt ctaaagtccc 360
 cagatagatc gttccctatt tttgccacat tctttttttc tctttttcatt taattcccca 420
 aatctttcat gtttatt 437

<210> 70
 <211> 98
 <212> PRT
 <213> Conus betulinus

<400> 70
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Ser Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Gly Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Thr Leu Lys Lys Arg Gly Asn Thr Arg Tyr
 65 70 75 80
 Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu Glu Ala
 85 90 95

Gly Lys

<210> 71

<211> 18
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residue 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu

<400> 71
 Gly Xaa Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Xaa
 1 5 10 15

Xaa Ala

<210> 72
 <211> 425
 <212> DNA
 <213> Conus betulinus

<400> 72
 gcgatgcaac tgtacacgta tctgtatctg ctggtgccgc tgggtgacctt ctacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggg gcactgactg aacgccgttt ggctgacgcc 120
 acagcgctga aacctgagcc tgtcctcctg cagaaatccg ccgcccgcag cactgacgac 180
 aatggcaagg acaggttgac tcagatgatc aggattctca aaaagcgagg aaacatggcc 240
 agaggcggcg gagaagttag agagtctgca gagactcttc atgaaatcac gccgtaggaa 300
 aaagaaaaag attaatacaag ctgggtgttc cacgtgacac tcgtcagttc taaagtcccc 360
 agtttcctat ctttgccagg tttctttctc ttttcattca attccccaaa tctttcatgt 420
 ttatt 425

<210> 73
 <211> 95
 <212> PRT
 <213> Conus betulinus

<400> 73
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Ile Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Gly
 65 70 75 80
 Gly Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr Pro

85

90

95

<210> 74
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; Xaa
 at residue 17 is Pro or hydroxy-Pro

<400> 74
 Gly Gly Gly Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Xaa

<210> 75
 <211> 434
 <212> DNA
 <213> Conus ammiralis

<400> 75
 gcgatgcaac tgtacacgta tctgtgtctg ctggtgcccc tggtagacctt ctacctaatt 60
 ctaggcacgg gcacactagc tcatggaggg gcactgaccg aacgccgttt ggctcacgcc 120
 agagtaatag aacctgatcc tgccccctg gagaactccg ctctccgcag catccgacga 180
 caacgacaag gacaggatga ctcagaggaa gaggattctc aaaaagtgat gaaacacggc 240
 cagaggcgcg aaagaagata gaaataatgc ggaggctggt agagaaagac tcgaagaaat 300
 aggaaaaagg taatcaagct ggggtgtttca cgtgacactc atcagttcta aagtccccag 360
 atagatcggt ccctattttt gccatattct ttccttctct tttcatgtaa ttcccctaat 420
 ctttcatggt tatt 434

<210> 76
 <211> 85
 <212> PRT
 <213> Conus ammiralis

<400> 76
 Met Gln Leu Tyr Thr Tyr Leu Cys Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 Tyr Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Leu Ala His Ala Arg Val Ile Glu Pro Asp Pro Ala Pro
 35 40 45
 Leu Glu Asn Ser Ala Leu Arg Ser Ile Arg Arg Gln Arg Gln Gly Gln
 50 55 60
 Asp Asp Ser Glu Glu Glu Asp Ser Gln Lys Val Met Lys His Gly Gln

Arg Arg Glu Arg Arg
85

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<210> 77
<211> 24
<212> PRT
<213> Conus ammiralis

<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 7, 8, 9 and
      22 is Glu or gamma-carboxy-Gl

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```
<400> 77
Xaa Gly Gln Asp Asp Ser Xaa Xaa Xaa Asp Ser Gln Lys Val Met Lys
1          5          10          15
```

His Gly Gln Arg Arg Xaa Arg Arg
20

<210>	78
<211>	421
<212>	DNA
<213>	Conus episcopatus

<400>	78						
gcgatgcaac	tgtacacgta	tctgtgtctg	ctggtgcccc	tggtgacctt	ctacctaatt		60
ctaggcacgg	gcacactagc	tcatggaggc	gcactgactg	aacatcgttc	ggccgacgcc		120
acagcactga	aacctgagcc	tgtcctcctg	cagaaatccg	ctgcccgcag	caccgacgac		180
aacggcaagg	acaggttgac	tcggtggaag	gggatttctca	aaaagcgagg	aaacacggcc		240
agaggcgggg	aagatattgt	ggagactatt	acagaactcg	aaaaaatagg	aaaaaggtaa		300
tcaagctggg	tgttccacgt	gacactcatc	agttctaaag	tccccagata	gatcgttccc		360
tatTTTTGCC	atattctttc	tttctctttt	catgtaattc	cccaaattct	tcatgtttat		420
t							421

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<210> 79
<211> 96
<212> PRT
<213> Conus episcopatus
```

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<400> 79
Met Gln Leu Tyr Thr Tyr Leu Cys Leu Leu Val Pro Leu Val Thr Phe
1          5          10          15
```

Tyr Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Leu Thr
20 25 30

Glu His Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
50 55 60

Leu Thr Arg Trp Lys Gly Ile Leu Lys Lys Arg Gly Asn Thr Arg Gly
65 70 75 80

Lys Asp Ile Val Glu Thr Ile Thr Glu Leu Glu Lys Ile Gly Lys Arg
85 90 95

<210> 80
<211> 15
<212> PRT
<213> Conus episcopatus

<220>
<221> PEPTIDE
<222> (1)..(15)
<223> Xaa at residues 7, 11 and 13 is Glu or gamma-carboxy-Glu

<400> 80
Gly Gly Lys Asp Ile Val Xaa Thr Ile Thr Xaa Leu Xaa Lys Ile
1 5 10 15

<210> 81
<211> 433
<212> DNA
<213> Conus lynceus
<400> 81

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaate 60
ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc gactgatgcc 120
atagcactga aacctgagcc tgtcctcctg cagaaatcct ctgcccgcag caccgacgat 180
aatggcaacg acaggttgac tcagatgaag aggatcctca aaaagcgagg aaacaaagcc 240
agaggcgaag aagaagttgc aaaaatggcg gcagagattg ccagagaaaa cgctgcaaatt 300
gggaaatgat aatcaagttg ggtgttccac gtgacactcg tcagtttctaa agtccccaga 360
tagatcggttc cctatTTTTTg ccacattctt tcttttcttt ttcatttaatt tccccaaatc 420
tttcatgttt att 433

<210> 82
<211> 99
<212> PRT
<213> Conus lynceus

<400> 82
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Ser Thr Asp Ala Ile Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ser Ala Arg Ser Thr Asp Asp Asn Gly Asn Asp Arg

Asn Gly Lys

```
<400> 83
Gly Xaa Xaa Xaa Val Ala Lys Met Ala Ala Xaa Ile Ala Arg Xaa Asn
1          5          10          15
```

<210>	84
<211>	430
<212>	DNA
<213>	Conus lynceus

<210>	85
<211>	101
<212>	PRT
<213>	Conus lynceus

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<400>      85  
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Ile Phe  
1              5                      10                  15  
  
Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Thr Leu Thr  
                20                    25                 30
```

Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Gly Asp Asp Ala Lys Glu Arg
50 55 60

Leu Thr Gln Thr Lys Arg Ile Arg Lys Lys Arg Ala Asn Thr Thr Arg
65 70 75 80

Gly Lys Glu Glu Asp Arg Glu Ile Val Glu Thr Val Arg Glu Leu Glu
85 90 95

Glu Ile Gly Lys Arg
100

<210> 86

<211> 18

<212> PRT

<213> Conus lynceus

<220>

<221> PEPTIDE

<222> (1)..(18)

<223> Xaa at residues 3, 4, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Gl

<400> 86

Gly Lys Xaa Xaa Asp Arg Xaa Ile Val Xaa Thr Val Arg Xaa Leu Xaa
1 5 10 15

Xaa Ile

<210> 87

<211> 433

<212> DNA

<213> Conus lynceus

<400> 87

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60

ctaggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc gactgacgcc 120

atagcactga aacctgagcc tgtcctcctg cagaaatcct ctgcccgcag caccgacgac 180

aatggcaacg acaggttgat tcagatgaag aggattctca aaaagcgagg aaacaaagcc 240

agaggcgaag aggaagttgc aaaaatggcg gcagagctta ccagagaaga agctgtaaag 300

gggaaatgat aatcaagttg ggtgttccac gtgacactcg tcagttctaa agtccccaga 360

tagatcggttc cctatTTTTTg ccacattctt tctttctatt ttcatttaat tccccaaatac 420

tttcatgttt att 433

<210> 88

<211> 99

<212> PRT

<213> Conus lynceus

<400> 88

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe

1	5	10	15
His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr	20	25	30
Glu Arg Arg Ser Thr Asp Ala Ile Ala Leu Lys Pro Glu Pro Val Leu	35	40	45
Leu Gln Lys Ser Ser Ala Arg Ser Thr Asp Asp Asn Gly Asn Asp Arg	50	55	60
Leu Ile Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu	65	70	75
Glu Glu Val Ala Lys Met Ala Ala Glu Leu Thr Arg Glu Glu Ala Val	85	90	95

Lys Gly Lys

<210> 89
 <211> 19
 <212> PRT
 <213> Conus lynceus

 <220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residues 2, 3, 4, 11, 15 and 16 is Glu or gamma-carboxy-Gl

<400> 89
Gly Xaa Xaa Xaa Val Ala Lys Met Ala Ala Xaa Leu Thr Arg Xaa Xaa
1 5 10 15

Ala Val Lys

<210> 90
 <211> 433
 <212> DNA
 <213> Conus figulinus

 <400> 90
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatac 60
 ctaggcacgg gcacgctagg tcatggaggc gcactgactg aacgccgttt ggctgacgcc 120
 acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 aatgacaagg acaggctgac ccagatgaag aggattttca aaaagcgagg aaacaaagcc 240
 agaggcgagg aagaagttgc agagatggcg gcagagattg caagagaaaa tcaagcaaac 300
 gggaaaagat aatcaaactg ggtgttccac gtgacactcg tcagttctaa agtccccaga 360
 taggtcgttc tctatgtttg ccacattcctt tctttttctt ttcatttaata tccccaaatac 420
 tttcatgttt att 433

<210> 91
 <211> 100

<212> PRT
<213> Conus figulinus

<400> 91
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15
Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
20 25 30
Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45
Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg
50 55 60
Leu Thr Gln Met Lys Arg Ile Phe Lys Lys Arg Gly Asn Lys Arg Glu
65 70 75 80
Glu Glu Val Ala Glu Met Ala Ala Glu Ile Ala Arg Glu Asn Gln Ala
85 90 95
Asn Gly Lys Arg
100

<210> 92
<211> 19
<212> PRT
<213> Conus figulinus

<220>
<221> PEPTIDE
<222> (1)..(19)
<223> Xaa at residues 2, 3, 4, 7, 11 and 15 is Glu or gamma-carboxy-Glu

<400> 92
Gly Xaa Xaa Xaa Val Ala Xaa Met Ala Ala Xaa Ile Ala Arg Xaa Asn
1 5 10 15

Gln Ala Asn

<210> 93
<211> 431
<212> DNA
<213> Conus figulinus

<400> 93
gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatac 60
ctagggacgg gcacactagc tcatggaggc gcaccgactg aacgccgttt ggctgacacc 120
acagcactga aacccgagca tgtcctcctg cagatgtccg ctgcccgcag caccaacgat 180
aatggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacagcc 240
agaagctacg aacaagctag agaagttcag gaggctgtta atgaactcaa ggaaagaggt 300
aaaaagataa tcatgctggg tgttccacgt gacactcgtc agttctaaag ccccagata 360
gattgttccg tatttttacc acgttctttc tttctctttt catttaattc cccaaatctt 420

431

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<210> 94
<211> 114
<212> PRT
<213> Conus figulinus
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<400> 94															
Met	Gln	Leu	Tyr	Thr	Tyr	Leu	Tyr	Leu	Leu	Val	Pro	Leu	Val	Thr	Phe
1				5					10					15	
Tyr	Leu	Ile	Leu	Gly	Thr	Gly	Thr	Leu	Ala	His	Gly	Gly	Ala	Pro	Thr
			20					25					30		
Glu	Arg	Arg	Leu	Ala	Asp	Thr	Thr	Ala	Leu	Lys	Pro	Glu	His	Val	Leu
		35					40					45			
Leu	Gln	Met	Ser	Ala	Ala	Arg	Ser	Thr	Asn	Asp	Asn	Gly	Lys	Asp	Arg
	50					55					60				
Leu	Thr	Gln	Met	Lys	Arg	Ile	Leu	Lys	Lys	Gln	Gly	Asn	Thr	Ala	Arg
65					70					75					80
Ser	Tyr	Glu	Gln	Ala	Arg	Glu	Val	Gln	Glu	Ala	Val	Asn	Glu	Leu	Lys
				85					90					95	
Glu	Arg	Gly	Lys	Lys	Ile	Ile	Met	Leu	Gly	Val	Pro	Arg	Asp	Thr	Arg
			100					105					110		

Gln Phe

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<210> 95
<211> 18
<212> PRT
<213> Conus figulinus
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```
<220>
<221> PEPTIDE
<222> (1)..(18)
<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-
sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10,
14 and 17 is Glu or gamma-carboxy-Glu
```

```
<400> 95
Ser Xaa Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
1          5          10          15
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Xaa Arg

```
<210> 96
<211> 431
<212> DNA
<213> Conus figulinus
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<400> 96
gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtgacctt ctacctaata 60
ctagggacgg gcacactagc tcatggaggg gcaccgactg aacgccggtt ggctgacacc 120
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acagcactga aacccgagca tgtcctcctg cagatgtccg ctgcccgcag caccaacgat 180
aatggcaagg acaggttgac tcagatgaag aggattctca aaaagcaagg aaacacagcc 240
agaagctacg aacaagctag agaagttcag gaggtgttta atgaactcaa ggaaagaggt 300
aaaaagataa tcatgctggg tgttccacgt gacactcgtc agttctaaag cccccagata 360
gattgttccg tatttttacc acgttctttc tttctctttt catttaattc cccaaatctt 420
tcatgtttat t 431

<210> 97
<211> 114
<212> PRT
<213> Conus figulinus

<400> 97
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15
Tyr Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Pro Thr
20 25 30
Glu Arg Arg Leu Ala Asp Thr Thr Ala Leu Lys Pro Glu His Val Leu
35 40 45
Leu Gln Met Ser Ala Ala Arg Ser Thr Asn Asp Asn Gly Lys Asp Arg
50 55 60
Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Gly Asn Thr Ala Arg
65 70 75 80
Ser Tyr Glu Gln Ala Arg Glu Val Gln Glu Ala Val Asn Glu Leu Lys
85 90 95
Glu Arg Gly Lys Lys Ile Ile Met Leu Gly Val Pro Arg Asp Thr Arg
100 105 110

Gln Phe

<210> 98
<211> 34
<212> PRT
<213> Conus figulinus

<220>
<221> PEPTIDE
<222> (1)..(34)
<223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10, 14 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 28 is Pro or hydroxy-Pro

<400> 98
Ser Xaa Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
1 5 10 15
Xaa Arg Gly Lys Lys Ile Ile Met Leu Gly Val Xaa Arg Asp Thr Arg
20 25 30

Gln Phe

<210> 99
 <211> 429
 <212> DNA
 <213> Conus figulinus

<400> 99
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacgtt ccacctaatac 60
 ctaggcacgg gcacactagc tcatggaggc gcactggctg aacgccgttt ggctgacgcc 120
 acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 aatggcaagg acaggttgac tgagatgaag aggattctca aaaagcgagg aaacacggcc 240
 agagactacg aagatgatag agagattgca gagactgtta gagaactcga agaaataggt 300
 aaaagataat caagctgggt gttcaattga cactcatcag ttctaaagtc cccagataga 360
 tcgttcccta attttgccac gttctttctt tctcttttca tttaattccc caaatctttc 420
 atgtttatt 429

<210> 100
 <211> 99
 <212> PRT
 <213> Conus figulinus

<400> 100
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Glu Arg
 20 25 30
 Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu Leu Gln
 35 40 45
 Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg Leu Thr
 50 55 60
 Glu Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg Asp Tyr
 65 70 75 80
 Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu Glu Ile
 85 90 95

Gly Lys Arg

<210> 101
 <211> 18
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa at residue 2 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-

sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-Glu

<400> 101

Asp Xaa Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Xaa
1 5 10 15

Xaa Ile

<210> 102

<211> 419

<212> DNA

<213> Conus figulinus

<400> 102

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ctacctaatac 60
ctaggcacgg gcacgctagg tcatggaggg gcactgactg aacgccgttt ggctgacgcc 120
acagcgctga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
aatggcaagg acaggttgac tcagatgaag gggactgtca aaaagcgagg aaacacggcc 240
gaagaagtta gagaggctgc agagactctt catgaactct cgctgtagga aaaagaaaaa 300
gattaatcaa gctgggtggt ccacgtgaca ctcgtcagtt ctaaagtccc cagttcccta 360
tctttgccac gttttttctt tctcttttca tccaattccc caaatctttc atgtttatt 419

<210> 103

<211> 94

<212> PRT

<213> Conus figulinus

<400> 103

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

Tyr Leu Ile Leu Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Arg Leu Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Gly Lys Asp Arg
50 55 60

Leu Thr Gln Met Lys Gly Thr Val Lys Lys Arg Gly Asn Thr Ala Glu
65 70 75 80

Glu Val Arg Glu Ala Ala Glu Thr Leu His Glu Leu Ser Leu
85 90

<210> 104

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<211> 23

<212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(23)
 <223> Xaa at residues 8, 12, 15, 19 and 22 is Glu or gamma-carboxy-Glu

<400> 107
 Gly Ser Ile Ser Met Gly Phe Xaa His Arg Arg Xaa Ile Ala Xaa Leu
 1 5 10 15

Val Arg Xaa Leu Ala Xaa Ile
 20

<210> 108
 <211> 427
 <212> DNA
 <213> Conus distans

<400> 108
 gcgatgcaac tgtacacgta tctgtatctg ctgggtgcccc tgggtggcctt ccacctaate 60
 caaggcacgg gcacactagg ccatggaggc gcactgactg aaggccgttc ggctgacgcc 120
 acagcgccga aacctgaacc tgtcctcctg cagaaatccg atgcccgcag cgccgacgac 180
 aacggcaagg acaagttgac tcagatgaag aggactctga aaaagcaagg acacattgcc 240
 agaaccataa ctgctgaaga ggcagagagg actagtgaag gaatgtcatc aatgggaaaa 300
 agataatcaa gctgggtggt ccacgtgaca ctcgtcagtt ctaaagtccc cagataaatc 360
 gttccctggt tttgccctgt tctttctttc tcttttcatt caattcccca aatctttcat 420
 gttttatt 427

<210> 109
 <211> 98
 <212> PRT
 <213> Conus distans

<400> 109
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Ala Phe
 1 5 10 15
 His Leu Ile Gln Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30
 Glu Gly Arg Ser Ala Asp Ala Thr Ala Pro Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Asp Ala Arg Ser Ala Asp Asp Asn Gly Lys Asp Lys
 50 55 60
 Leu Thr Gln Met Lys Arg Thr Leu Lys Lys Gln Gly His Ile Ala Arg
 65 70 75 80
 Thr Ile Thr Ala Glu Glu Ala Glu Arg Thr Ser Met Ser Ser Met Gly
 85 90 95

Lys Arg

<210> 110
 <211> 17
 <212> PRT
 <213> Conus distans

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa at residues 5, 6, 8 and 12 is Glu or gamma-carboxy-Glu

<400> 110
 Thr Ile Thr Ala Xaa Xaa Ala Xaa Arg Thr Ser Xaa Arg Met Ser Ser
 1 5 10 15

Met

<210> 111
 <211> 415
 <212> DNA
 <213> Conus distans

<400> 111
 gcgatgcaac tgtacacgta tctgtatctg ctggtatccc tgggtggcctt ccacctaatac 60
 caaggaacgg gcacgctagg ccatggaggc gcactgactg aaggccgttc ggctgacgcc 120
 acagcgccga aacctgaacc tgtgctcgtg cagaaatcgg atgcccgcag cgccgacgac 180
 aaccgcaagg acaagttgac tcagatgaag aggattctga aaaagcaaga aaccccaact 240
 cctgaagagg tagagcgcca taccgaaaga ctcaaaagca tgggaaaaag ataatacaagc 300
 tgggtgttcc acgtgacact cgtcagttct aaagtcccca gatggatcgt tccctgtttt 360
 tgccccgttc ttctggttctc ttttcattca attccccaaa tctttcatgt ttatt 415

<210> 112
 <211> 96
 <212> PRT
 <213> Conus distans

<400> 112
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Ser Leu Val Ala Phe
 1 5 10 15

His Leu Ile Gln Gly Thr Gly Thr Leu Gly His Gly Gly Ala Leu Thr
 20 25 30

Glu Gly Arg Ser Ala Asp Ala Thr Ala Pro Lys Pro Glu Pro Val Leu
 35 40 45

Val Gln Lys Ser Asp Ala Arg Ser Ala Asp Asp Asn Arg Lys Asp Lys
 50 55 60

Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Gln Glu Thr Pro Thr Pro
 65 70 75 80

Glu Glu Val Glu Arg His Thr Glu Arg Leu Lys Ser Met Gly Lys Arg

85

90

95

<210> 113
 <211> 19
 <212> PRT
 <213> Conus distans

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 2, 4, 6, 7, 8, 10 and 14 is Glu or gamma-carboxy-Glu

<400> 113
 Xaa Xaa Thr Xaa Thr Xaa Xaa Xaa Val Xaa Arg His Thr Xaa Arg Leu
 1 5 10 15

Lys Ser Met

<210> 114
 <211> 439
 <212> DNA
 <213> Conus purpurascens

<400> 114
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tgggtgacctt ccacctaatac 60
 ctaggcacgg gaatgctagc tcatggagac aactgactg aacgccgttc ggttgacgcc 120
 acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
 aatgacaagg acaggttgac tcagatgaag aggatttctca aaaagcgagg aaacaaagcc 240
 agaggcgaag aagaacattc caagtatcaa gagtgtctta gagaagtaag agtaaataag 300
 gtacaacaag aatgttaatc aagctgggtg ttccacgtga cactcgtcag ttctaaagtc 360
 cccagataga tcgttcccga tttttgccac attcttttctt tctctttttca tttaattccc 420
 caaatctttc atgtttatt 439

<210> 115
 <211> 102
 <212> PRT
 <213> Conus purpurascens

<400> 115
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Met Leu Ala His Gly Asp Thr Leu Thr
 20 25 30
 Glu Arg Arg Ser Val Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg
 50 55 60
 Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu

Lys Val Gln Gln Glu Cys
100

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<220>
<221> PEPTIDE
<222> (1)..(24)
<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu; Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr
```

Val Asn Lys Val Gln Gln Xaa Cys
20

<400>	117					
gcgatgcaac	tgtacacgta	tctgtatctg	ctggtgcccc	tggtgacctt	ccacctaatac	60
ctaggcacgg	gcacactagc	tcatggaggc	gcactgactg	aacgcgggttc	cactgacgcc	120
acagcactga	aacctgagcc	tgtcctgcag	gaatctgatg	cccgcagcac	cgacgacaat	180
gacaaggaca	ggttgactca	gatgaagagg	attctcaaaa	agcgaggaaa	caaagccaga	240
ggcgaagaag	aacattccaa	gtatcaggag	tgtcttagag	aagtaagagt	aaataacgta	300
caacaagaat	gttaatcaag	ctgggtgttc	cacgtgacac	tcgtcagttc	taaagtcccc	360
agatagatcg	ttccctattt	ttgccacatt	ctttctttct	cttttcattt	aattccccaa	420
atctttcatg	tttatt					436

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<400> 118
Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1          5          10          15
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His Leu Ile Leu Gly Thr Gly Thr Leu Ala His Gly Gly Ala Leu Thr
20 25 30

Glu Arg Gly Ser Thr Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Gln Glu Ser Asp Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg Leu
50 55 60

Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu Glu
65 70 75 80

Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Val Arg Val Asn Asn
85 90 95

Val Gln Gln Glu Cys
100

<210> 119

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr,
O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 119

Gly Xaa Xaa Xaa His Ser Lys Xaa Gln Xaa Cys Leu Arg Xaa Val Arg
1 5 10 15

Val Asn Asn Val Gln Gln Xaa Cys
20

<210> 120

<211> 439

<212> DNA

<213> Conus purpurascens

<400> 120

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tgggtgacctt ccacctaate 60
ctaagcacgg gcacactagc tcatggaggc aactgactg aacgccgttc gactgacacc 120

acagcactga aacctgagcc tgtcctcctg cagaaatctg atgcccgcag caccgacgac 180

aatgacaagg acaggttgac tcagatgaag aggattctca aaaagcgagg aaacaaagcc 240

agaggcgaag aagaacattc caagtatcag gagtgtctta gagaaataag agtaaataag 300

gtacaacaag aatgttaatc aagctgggtg ttccacgtga caccgcgtcag ttctaaagtc 360

cccagataga tcgttcctta tttttgccac attctttctt tctcttttca ttttaattccc 420

caaatctttc atgtttatt 439

<210> 121

<211> 102

<212> PRT

<213> Conus purpurascens

<400> 121

Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
1 5 10 15

His Leu Ile Leu Ser Thr Gly Thr Leu Ala His Gly Gly Thr Leu Thr
20 25 30

Glu Arg Arg Ser Thr Asp Thr Thr Ala Leu Lys Pro Glu Pro Val Leu
35 40 45

Leu Gln Lys Ser Asp Ala Arg Ser Thr Asp Asp Asn Asp Lys Asp Arg
50 55 60

Leu Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Lys Arg Glu
65 70 75 80

Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Ile Arg Val Asn
85 90 95

Lys Val Gln Gln Glu Cys
100

<210> 122

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa at residues 2, 3, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
Xaa at residue 8 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr,
O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 122

Gly Xaa Xaa Xaa His Ser Lys Xaa Gln Xaa Cys Leu Arg Xaa Ile Arg
1 5 10 15

Val Asn Lys Val Gln Gln Xaa Cys
20

<210> 123

<211> 439

<212> DNA

<213> Conus purpurascens

<400> 123

gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60
ctaagcacgg gcacactagc tcatggagac aactgactg aacgccgttc ggtagacgcc 120
acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgac 180
gatgacaagg acaggttgac tcagaggaag aggattctca aaaagcaagg aaacaaagcc 240
agaggcgaag cagaacatta cgcgtttcag gagggtctta gagaaataaa tgtaaataag 300
gtacaacaag aatgttaatac aagctgggtg ttctacgtga cactcgtcag ttctaaagtc 360
cccagataga tcgttccta tttttgccac attctttctt tctcttttca ttttaattccc 420

caaatctttc atgtttatt

439

<210> 124
 <211> 102
 <212> PRT
 <213> Conus purpurascens

<400> 124
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Ser Thr Gly Thr Leu Ala His Gly Asp Thr Leu Thr
 20 25 30
 Glu Arg Arg Ser Val Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Asp Asp Lys Asp Arg
 50 55 60
 Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Gln Gly Asn Lys Arg Glu
 65 70 75 80
 Ala Glu His Tyr Ala Phe Gln Glu Cys Leu Arg Glu Ile Asn Val Asn
 85 90 95
 Lys Val Gln Gln Glu Cys
 100

<210> 125
 <211> 24
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa at residues 2, 4, 10, 14 and 23 is Glu or gamma-carboxy-Glu;
 Xaa at residue 6 is Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-
 sulpho-Tyr, O-phospho-Tyr or nitro-Tyr

<400> 125
 Gly Xaa Ala Xaa His Xaa Ala Phe Gln Xaa Cys Leu Arg Xaa Ile Asn
 1 5 10 15
 Val Asn Lys Val Gln Gln Xaa Cys
 20

<210> 126
 <211> 421
 <212> DNA
 <213> Conus purpurascens

<400> 126
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tggtagacctt ccacctaatac 60
 ctaggcacgg gaatgctagc tcatggagac aactgactg aacgccgttc ggtagacgcc 120
 acagcactga aacctgagcc tgtcctcctg cagaaatccg ctgcccgcag caccgacgcc 180

aatggcaagg acaggttgac tcagaggaag aggattctca aaaagcgagg aaacatggcc 240
 aggggcttag aagaagatat agagtttatt gagacgatcg aagaaattgg aaaaagataa 300
 ccaagctggg tgttccacgt gacactcgtc gggttctaaag tccccagata gatcgttcac 360
 tatttttgcc acattctttc tttctctttt catttaattc cccaaatctt tcatgtttat 420
 t 421

<210> 127
 <211> 96
 <212> PRT
 <213> Conus purpurascens

<400> 127
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Met Leu Ala His Gly Asp Thr Leu Thr
 20 25 30
 Glu Arg Arg Ser Val Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Leu Gln Lys Ser Ala Ala Arg Ser Thr Asp Ala Asn Gly Lys Asp Arg
 50 55 60
 Leu Thr Gln Arg Lys Arg Ile Leu Lys Lys Arg Gly Asn Met Arg Leu
 65 70 75 80
 Glu Glu Asp Ile Glu Phe Ile Glu Thr Ile Glu Glu Ile Gly Lys Arg
 85 90 95

<210> 128
 <211> 15
 <212> PRT
 <213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 4, 7, 10, 13 and 14 is Glu or gamma-carboxy-Glu

<400> 128
 Gly Leu Xaa Xaa Asp Ile Xaa Phe Ile Xaa Thr Ile Xaa Xaa Ile
 1 5 10 15

<210> 129
 <211> 418
 <212> DNA
 <213> Conus stercusmuscarum

<400> 129
 gcgatgcaac tgtacacgta tctgtatctg ctggtgcccc tgggtgacctt ccacctaatac 60
 ctgggcacgg gcacactaga tcatggaggc gcactgactg aacgccgttc ggctgacgcc 120

acagcgctga aacctgagcc tgtcctgcag aaatccgctg ccggcagcac cgacgacaac 180
 ggcaaggaca ggttgactca gatgaagagg attctcaaaa agcgaggaaa cacggctaga 240
 atcaccgaaa ctgatataga gcttggttatg aaattagaag aaattggaaa aagataatca 300
 agctgggtgt tccacgtgac actcgtcagt tctgaagtcc cgaggtagat cgttccctat 360
 ttttgccaca ttcttttcttt ctcttttcat gtaattcccc aaatctttca tgttttatt 418

<210> 130
 <211> 97
 <212> PRT
 <213> Conus stercusmuscarum

<400> 130
 Met Gln Leu Tyr Thr Tyr Leu Tyr Leu Leu Val Pro Leu Val Thr Phe
 1 5 10 15
 His Leu Ile Leu Gly Thr Gly Thr Leu Asp His Gly Gly Ala Leu Thr
 20 25 30
 Glu Arg Arg Ser Ala Asp Ala Thr Ala Leu Lys Pro Glu Pro Val Leu
 35 40 45
 Gln Lys Ser Ala Ala Gly Ser Thr Asp Asp Asn Gly Lys Asp Arg Leu
 50 55 60
 Thr Gln Met Lys Arg Ile Leu Lys Lys Arg Gly Asn Thr Ala Arg Ile
 65 70 75 80
 Thr Glu Thr Asp Ile Glu Leu Val Met Lys Leu Glu Glu Ile Gly Lys
 85 90 95

Arg

<210> 131
 <211> 15
 <212> PRT
 <213> Conus stercusmuscarum

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa at residues 3, 7, 13 and 14 is Glu or gamma-carboxy-Glu
 <400> 131
 Ile Thr Xaa Thr Asp Ile Xaa Leu Val Met Lys Leu Xaa Xaa Ile
 1 5 10 15

<210> 132
 <211> 17
 <212> PRT
 <213> Conus geographus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu
 <400> 132

Conus stercusmuscarum

Gly Glu Xaa Xaa Leu Gln Xaa Asn Gln Xaa Leu Ile Arg Xaa Lys Ser
 1 5 10 15

Asn

<210> 133
 <211> 24
 <212> PRT
 <213> Conus ammiralis

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 133

Glx Gly Gln Asp Asp Ser Glu Xaa Xaa Asp Ser Gln Lys Val Met Lys
 1 5 10 15

His Gly Gln Arg Arg Glu Arg Arg
 20

<210> 134
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 134

Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Leu Thr
 1 5 10 15

Pro

<210> 135
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 135

Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Pro

<210> 136
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 136
 Asp Gly Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu Asn Xaa Leu Thr
 1 5 10 15

Pro

<210> 137
 <211> 18
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 137
 Gly Tyr Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Glu
 1 5 10 15

Glu Ala

<210> 138
 <211> 17
 <212> PRT
 <213> Conus betulinus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 138

Gly Gly Gly Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
 1 5 10 15

Pro

<210> 139
 <211> 18
 <212> PRT
 <213> Conus bullatus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 139
 Asn Pro Xaa Thr Tyr Ile Xaa Ile Val Xaa Ile Ser Arg Xaa Leu Glu
 1 5 10 15

Glu Ile

<210> 140
 <211> 20
 <212> PRT
 <213> Conus bullatus

<220>
 <221> PEPTIDE
 <222> (1)..(20)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 140
 Asn Pro Xaa Thr Tyr Tyr Asn Leu Xaa Leu Val Xaa Ile Ser Arg Glu
 1 5 10 15

Leu Glu Glu Ile
 20

<210> 141
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 141
 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Glu Arg Asn

<210> 142
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 142
 Gly Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
 1 5 10 15

Glu Arg Asp

<210> 143
 <211> 19
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 143

Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Pro
 1 5 10 15

Glu Arg Asn

<210> 144
 <211> 17
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(17)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 144
 Ile Glu Xaa Gly Leu Ile Xaa Asp Leu Xaa Thr Ala Arg Xaa Arg Asp
 1 5 10 15

Ser

<210> 145
 <211> 15
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 145
 Ile Glu Xaa Gly Leu Ile Xaa Asp Leu Xaa Arg Xaa Arg Asp Ser
 1 5 10 15

<210> 146
 <211> 29
 <212> PRT
 <213> Conus catus

<220>
 <221> PEPTIDE
 <222> (1)..(29)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 146
 Gly Glu Pro Xaa Val Gly Ser Ile Pro Xaa Ala Val Arg Gln Gln Glu
 1 5 10 15

Cys Ile Arg Asn Asn Asn Arg Pro Trp Cys Pro Lys
 20 25

<210> 147
 <211> 17
 <212> PRT
 <213> Conus distans

<220>
 <221> PEPTIDE
 <222> (1)..(17)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 147

Thr	Ile	Thr	Ala	Xaa	Xaa	Ala	Xaa	Arg	Thr	Ser	Xaa	Arg	Met	Ser	Ser
1				5					10					15	

Met

<210> 148

<211> 19

<212> PRT

<213> Conus distans

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 148

Glx	Glu	Thr	Pro	Thr	Pro	Xaa	Xaa	Val	Xaa	Arg	His	Thr	Xaa	Arg	Leu
1				5					10					15	

Lys Ser Met

<210> 149

<211> 15

<212> PRT

<213> Conus episcopatus

<220>

<221> PEPTIDE

<222> (1)..(15)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 149

Gly	Gly	Lys	Asp	Ile	Val	Xaa	Thr	Ile	Thr	Xaa	Leu	Xaa	Lys	Ile
1				5					10					15

<210> 150

<211> 19

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE

<222> (1)..(19)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 150

Gly	Glu	Xaa	Xaa	Val	Ala	Xaa	Met	Ala	Ala	Xaa	Ile	Ala	Arg	Xaa	Asn
1				5					10					15	

Gln Ala Asn

<210> 151

<211> 18

<212> PRT

<213> Conus figulinus

<220>

<221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 151
 Ser Tyr Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
 1 5 10 15

Glu Arg

<210> 152
 <211> 34
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(34)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 152
 Ser Tyr Xaa Gln Ala Arg Xaa Val Gln Xaa Ala Val Asn Xaa Leu Lys
 1 5 10 15

Glu Arg Gly Lys Lys Ile Ile Met Leu Gly Val Pro Arg Asp Thr Arg
 20 25 30

Gln Phe

<210> 153
 <211> 18
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 153
 Asp Tyr Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Glu
 1 5 10 15

Glu Ile

<210> 154
 <211> 19
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 154
 Gly Asn Thr Ala Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu His Glu
 1 5 10 15

Leu Ser Leu

<210> 155
 <211> 23
 <212> PRT
 <213> Conus figulinus

<220>
 <221> PEPTIDE
 <222> (1)..(23)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 155
 Gly Ser Ile Ser Met Gly Phe Xaa His Arg Arg Xaa Ile Ala Xaa Leu
 1 5 10 15

Val Arg Glu Leu Ala Glu Ile
 20

<210> 156
 <211> 19
 <212> PRT
 <213> Conus lynceus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 156
 Gly Glu Xaa Xaa Val Ala Lys Met Ala Ala Xaa Ile Ala Arg Xaa Asn
 1 5 10 15

Ala Ala Asn

<210> 157
 <211> 18
 <212> PRT
 <213> Conus lynceus

<220>
 <221> PEPTIDE
 <222> (1)..(18)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 157
 Gly Lys Xaa Xaa Asp Arg Xaa Ile Val Xaa Thr Val Arg Xaa Leu Glu
 1 5 10 15

Glu Ile

<210> 158
 <211> 19
 <212> PRT
 <213> Conus lynceus

<220>
 <221> PEPTIDE
 <222> (1)..(19)
 <223> Xaa is Glu or gamma-carboxy-Glu

Conus figulinus

<400> 158

Gly Glu Xaa Xaa Val Ala Lys Met Ala Ala Xaa Leu Thr Arg Xaa Glu
 1 5 10 15

Ala Val Lys

<210> 159

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 159

Gly Glu Xaa Xaa His Ser Lys Tyr Gln Xaa Cys Leu Arg Xaa Val Arg
 1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
 20

<210> 160

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 160

Gly Glu Xaa Xaa His Ser Lys Tyr Gln Xaa Cys Leu Arg Xaa Val Arg
 1 5 10 15

Val Asn Asn Val Gln Gln Glu Cys
 20

<210> 161

<211> 24

<212> PRT

<213> Conus purpurascens

<220>

<221> PEPTIDE

<222> (1)..(24)

<223> Xaa is Glu or gamma-carboxy-Glu

<400> 161

Gly Glu Xaa Xaa His Ser Lys Tyr Gln Xaa Cys Leu Arg Xaa Ile Arg
 1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
 20

<210> 162

<211> 24

<212> PRT

<213> Conus purpurascens

<220>
 <221> PEPTIDE
 <222> (1)..(24)
 <223> Xaa is Glu or gamma-carboxy-Glu

 <400> 162
 Gly Glu Ala Xaa His Tyr Ala Phe Gln Xaa Cys Leu Arg Xaa Ile Asn
 1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
 20

<210> 163
 <211> 15
 <212> PRT
 <213> *Conus purpurascens*

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 163
 Gly Leu Xaa Xaa Asp Ile Xaa Phe Ile Xaa Thr Ile Xaa Glu Ile
 1 5 10 15

<210> 164
 <211> 15
 <212> PRT
 <213> *Conus stercusmuscarum*

<220>
 <221> PEPTIDE
 <222> (1)..(15)
 <223> Xaa is Glu or gamma-carboxy-Glu

<400> 164
 Ile Thr Xaa Thr Asp Ile Xaa Leu Val Met Lys Leu Xaa Glu Ile
 1 5 10 15

<210> 165
 <211> 24
 <212> PRT
 <213> *Conus ammiralis*

<400> 165
 Glx Gly Gln Asp Asp Ser Glu Glu Glu Asp Ser Gln Lys Val Met Lys
 1 5 10 15

His Gly Gln Arg Arg Glu Arg Arg
 20

<210> 166
 <211> 17
 <212> PRT
 <213> *Conus betulinus*

<400> 166
 Gly Gly Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Leu Thr

1

5

10

15

Pro

<210> 167
 <211> 17
 <212> PRT
 <213> Conus betulinus

<400> 167
 Gly Gly Glu Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr
 1 5 10 15

Pro

<210> 168
 <211> 17
 <212> PRT
 <213> Conus betulinus

<400> 168
 Asp Gly Glu Glu Val Arg Glu Ala Ala Glu Thr Leu Asn Glu Leu Thr
 1 5 10 15

Pro

<210> 169
 <211> 18
 <212> PRT
 <213> Conus betulinus

<400> 169
 Gly Tyr Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu
 1 5 10 15

Glu Ala

<210> 170
 <211> 17
 <212> PRT
 <213> Conus betulinus

<400> 170
 Gly Gly Gly Glu Val Arg Glu Ser Ala Glu Thr Leu His Glu Ile Thr
 1 5 10 15

Pro

<210> 171
 <211> 18
 <212> PRT
 <213> Conus bullatus

<400> 171
 Asn Pro Glu Thr Tyr Ile Glu Ile Val Glu Ile Ser Arg Glu Leu Glu
 1 5 10 15

Glu Ile

<210> 172

<211> 20
 <212> PRT
 <213> Conus bullatus

<400> 172
 Asn Pro Glu Thr Tyr Tyr Asn Leu Glu Leu Val Glu Ile Ser Arg Glu
 1 5 10 15
 Leu Glu Glu Ile
 20

<210> 173
 <211> 19
 <212> PRT
 <213> Conus catus

<400> 173
 Ser Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
 1 5 10 15

Glu Arg Asn

<210> 174
 <211> 19
 <212> PRT
 <213> Conus catus

<400> 174
 Gly Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Leu
 1 5 10 15

Glu Arg Asp

<210> 175
 <211> 19
 <212> PRT
 <213> Conus catus

<400> 175
 Ser Asp Glu Glu Leu Leu Arg Glu Asp Val Glu Thr Val Leu Glu Pro
 1 5 10 15

Glu Arg Asn

<210> 176
 <211> 17
 <212> PRT
 <213> Conus catus

<400> 176
 Ile Glu Glu Gly Leu Ile Glu Asp Leu Glu Thr Ala Arg Glu Arg Asp
 1 5 10 15

Ser

<210> 177
 <211> 17
 <212> PRT
 <213> Conus catus

<400> 177

Ile	Glu	Glu	Gly	Leu	Ile	Glu	Asp	Leu	Glu	Ala	Ala	Arg	Glu	Arg	Asp
1				5					10					15	

Ser

<210> 178

<211> 29

<212> PRT

<213> Conus catus

<400> 178

Gly	Glu	Pro	Glu	Val	Gly	Ser	Ile	Pro	Glu	Ala	Val	Arg	Gln	Gln	Glu
1				5					10					15	

Cys	Ile	Arg	Asn	Asn	Asn	Asn	Arg	Pro	Trp	Cys	Pro	Lys
			20					25				

<210> 179

<211> 15

<212> PRT

<213> Conus distans

<400> 179

Thr	Ile	Thr	Ala	Glu	Glu	Ala	Glu	Arg	Thr	Ser	Met	Ser	Ser	Met
1				5					10					15

<210> 180

<211> 19

<212> PRT

<213> Conus distans

<400> 180

Glx	Glu	Thr	Pro	Thr	Pro	Glu	Glu	Val	Glu	Arg	His	Thr	Glu	Arg	Leu
1				5					10					15	

Lys Ser Met

<210> 181

<211> 15

<212> PRT

<213> Conus episcopatus

<400> 181

Gly	Gly	Lys	Asp	Ile	Val	Glu	Thr	Ile	Thr	Glu	Leu	Glu	Lys	Ile
1				5					10					15

<210> 182

<211> 19

<212> PRT

<213> Conus figulinus

<400> 182

Gly	Glu	Glu	Glu	Val	Ala	Glu	Met	Ala	Ala	Glu	Ile	Ala	Arg	Glu	Asn
1				5					10					15	

Gln Ala Asn

<210> 183

<211> 18

<212> PRT
 <213> Conus figulinus

<400> 183
 Ser Tyr Glu Gln Ala Arg Glu Val Gln Glu Ala Val Asn Glu Leu Lys
 1 5 10 15

Glu Arg

<210> 184
 <211> 34
 <212> PRT
 <213> Conus figulinus

<400> 184
 Ser Tyr Glu Gln Ala Arg Glu Val Gln Glu Ala Val Asn Glu Leu Lys
 1 5 10 15

Glu Arg Gly Lys Lys Ile Ile Met Leu Gly Val Pro Arg Asp Thr Arg
 20 25 30

Gln Phe

<210> 185
 <211> 18
 <212> PRT
 <213> Conus figulinus

<400> 185
 Asp Tyr Glu Asp Asp Arg Glu Ile Ala Glu Thr Val Arg Glu Leu Glu
 1 5 10 15

Glu Ile

<210> 186
 <211> 19
 <212> PRT
 <213> Conus figulinus

<400> 186
 Gly Asn Thr Ala Glu Glu Val Arg Glu Ala Ala Glu Thr Leu His Glu
 1 5 10 15

Leu Ser Leu

<210> 187
 <211> 23
 <212> PRT
 <213> Conus figulinus

<400> 187
 Gly Ser Ile Ser Met Gly Phe Glu His Arg Arg Glu Ile Ala Glu Leu
 1 5 10 15

Val Arg Glu Leu Ala Glu Ile
 20

<210> 188
 <211> 19
 <212> PRT

<213> Conus lynceus

<400> 188

Gly Glu Glu Glu Val Ala Lys Met Ala Ala Glu Ile Ala Arg Glu Asn
1 5 10 15

Ala Ala Asn

<210> 189

<211> 18

<212> PRT

<213> Conus lynceus

<400> 189

Gly Lys Glu Glu Asp Arg Glu Ile Val Glu Thr Val Arg Glu Leu Glu
1 5 10 15

Glu Ile

<210> 190

<211> 19

<212> PRT

<213> Conus lynceus

<400> 190

Gly Glu Glu Glu Val Ala Lys Met Ala Ala Glu Leu Thr Arg Glu Glu
1 5 10 15

Ala Val Lys

<210> 191

<211> 24

<212> PRT

<213> Conus purpurascens

<400> 191

Gly Glu Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Val Arg
1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
20

<210> 192

<211> 24

<212> PRT

<213> Conus purpurascens

<400> 192

Gly Glu Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Val Arg
1 5 10 15

Val Asn Asn Val Gln Gln Glu Cys
20

<210> 193

<211> 24

<212> PRT

<213> Conus purpurascens

<400> 193

Gly Glu Glu Glu His Ser Lys Tyr Gln Glu Cys Leu Arg Glu Ile Arg
 1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
 20

<210> 194
 <211> 24
 <212> PRT
 <213> Conus purpurascens

<400> 194
 Gly Glu Ala Glu His Tyr Ala Phe Gln Glu Cys Leu Arg Glu Ile Asn
 1 5 10 15

Val Asn Lys Val Gln Gln Glu Cys
 20

<210> 195
 <211> 15
 <212> PRT
 <213> Conus purpurascens

<400> 195
 Gly Leu Glu Glu Asp Ile Glu Phe Ile Glu Thr Ile Glu Glu Ile
 1 5 10 15

<210> 196
 <211> 15
 <212> PRT
 <213> Conus stercusmuscarum

<400> 196
 Ile Thr Glu Thr Asp Ile Glu Leu Val Met Lys Leu Glu Glu Ile
 1 5 10 15